Development of non-conventional energy sources

746. SHRI CHIMANBHAI MEHTA:
SHRI ANANTRAY DEV-SHANKER DAVE-

Will the PRIME MINISTER be pleased to state:

(a) what are the plans to develop non-conventional energy sources during the current five year plan;

(b) whether he has stated that the country is likely to achieve a break through in solar energy this year, as published in the 'Hindustan Times' of 23rd February, 1995 under the heading "research on Hydrogen as energy sources" if so, the details thereof; and

(c) what is the cost of power produced from solar energy and its comparison to conventional sources of power?

THE MINISTER OF STATE IN THE MINISTRY OF NON-CONVENTIONAL ENERGY SOURCES (SHRI S. KRISHNA KUMAR): (a) Ministry of Non-Conventional Energy Sources is implementing wide ranging programmes to develop and utilise various non-conventional energy sources. The major programmes implemented during the 8th Plan includes: biogas, biomass, improved chulha, solar photovoitaics, solar thermal, wind, small hydro energy recovery from wastes and hydrozen energy etc. The details, of physical targets and approved outlays of the 8th Plan are given in Statement. *(Sec* below).

(b) In the consultative committee meeting on new technonlogies held on 22nd February, 1995 it was informed that a break through is likely to be achieved in the field of solar photovoitaics. A few international manufacturers have shown interest in setting up of large size SPV power plants in India with SPV moduels manufactured in the country. This could give a major boost to Indian industry to achieve technology break though in this field.

(c) The cost of power generation from solar energy is dependent on the site, capacity of the project a*nd* the technodogy empolyed. It has been estimated that the cost of electrie^ generation from solar photovoltaic based power project in MW range will vary from Rs. 15-20 pet unit- This is expected to come down with technological improvements and mass production.

Statement

Eighth Five Year Plan (1992-97) -*Financial* & *Physical*

Sl. No.	Programmes	Approved Outlays (Rs. in Crores)	Tentative Physical Targets
I.	*Non-Conventional Energy Sources*	857·00	
1.	Biogas Development Programme	320·00	
	(a) Family Size Plants		7.50 lakh Nos.
	(b) CBP/IBP/NBP		450 Nos.
2.	Improved Chulha Programme	80.00	100 lakh Nos.
3.	Solar Thermal Programme	80.00	
	(a) Solar Thermal Energy Systems		2.75 lakh sq. m. Coll. Area
	(b) Solar Cookers		3.00 lakh Nos.
4.	Solar Photovoltaic Programme	90.00	
	(a) SPV Lighting Systems		25,000 Nos.

1	2	3	4
	(b) SPV Water Pumps		600 Nos.
	(c) Other SPV Systems		1720 KW
5.	Wind Energy Programme	90.00	
	(a) Wind Pumps		4000 Nos.
	(b) Wind Battery Chargers		500 Nos.]
	(c) Wind Power		100 MW*
6.	Urjagram (Surveys)	1.00	
7.	Biomass Development Programme	15·00 @	
8.	Human and Animal Energy Programme	1.00	
9.	Bioenergy Development Programme	20·00	300 MW*
10.	Small Hydel Power Development Programme	100.00	200 MW*
11.	Alternate Fuels for Surface Transportation	10.00	
12.	Magneto Hydro Dynamics		
13.	Geo-thermal Energy		
14.	Chemical Sources of Energy	10.00	
15.	Ocean Energy		
16.	Hydrogen Energy		
17.	Indian Renewable Energy Development Agency Ltd.	10·00	
18.	Regional Offices etc.		
19.	Information & Publicity		
20.	Seminars/Conferences	10·00	
21.	International Cooperation		
22.	Data Bank/TIFAC		
23.	Solar Energy Centre	15·00	
24.	Special Area Programmes & Demonstration Activities	5·00	
II.	*Integrated Rural Energy Programme*	85.00+	
1.	New IREP Blocks		300 Nos.
2.	Minimum Domestic Energy Needs	**	

@tncludes Biomass Gasiliers;

•Includes Private Sector;

xlnitially Rs. 250- 00 crores were indicated;

**Rs. 500.00 crores were indicated in the 8th Plan document, but yet to be made available.

Projects cleared under non-Conventional Energy Sources

747. SHRI S. VIDUTHALAI VIRUMBI: Will the PRIME MINISTER be pleased to state:

(a) how many projects have been cleared under non-coventional energy programme;

(b) whether it is a fact that some MOUs have been signed, if so, the details thereof: and

(e) what is the present situation regarding implementation of those projects?

THE MINISTER OF STATE IN THE MINISTRY OF NON-CONVENTIONAL ENERGY SOURCES (SHRI S. KRISHNA KUMAR): (a) to (c) Ministry of Non-Conventional Energy Sources is implementing a large number of projects/pro, grammes covering the entire range of renewable energy technologies. Major projects/programmes are being implemented in the field of solar energy, wind, biogas, biomass, cogeneration, small hydro, energy recovery from waste etc.